

# **EXECUTIVE SUMMARY**

## **AIRCRAFT ACCIDENT INVESTIGATION BOARD**

**F-15E, S/N 97-0217**

**ROYAL AIR FORCE LAKENHEATH, UK**

**16 APRIL 2003**

On 16 April 2003 at approximately 1530 local time, an F-15E, S/N 97-0217, suffered engine failure in the #1 (left) engine while in flight. The mishap aircraft (MA), assigned to the 492<sup>d</sup> Fighter Squadron, 48<sup>th</sup> Fighter Wing, RAF Lakenheath was on a basic surface attack training mission at the Donna Nook Range approximately 60 nautical miles from RAF Lakenheath.

Mission planning and briefings were normal. Ground operations, preflight inspection, engine start, taxi, and takeoff were uneventful. Flight to the range was uneventful. Descending through 1,300 feet above ground level (AGL) at 450 knots indicated air speed on final approach to the target, the aircrew experienced a compressor stall with severe vibrations from the mishap engine (ME). The Mishap Pilot (MP) initiated a climb and retarded the ME throttle to idle. The stall ceased and engine indications returned to normal. There were no other abnormal engine indications noted. At approximately 3,000 feet AGL the MP slowly advanced the ME throttle to midrange power. The ME stalled and the vibrations returned. The MP retarded the engine to idle in accordance with checklist procedures and the ME indications returned to normal. The MP declared an in-flight emergency and returned to RAF Lakenheath with the engine in idle for an otherwise uneventful single-engine procedural approach and landing.

There were no injuries or fatalities as a result of this mishap. The aircraft suffered approximately US \$1.012 million in damage confined to the ME. There are no claims for damage to government or private property and no media inquiries have been received.

The primary cause of this mishap was the liberation of a small piece (approximately 4.8 cm by 3 cm) of a second stage stator vane, a known problem for this series of engines. The piece liberated due to high cycle fatigue and was ingested into the ME causing further damage. Preventative maintenance action including replacement of the second stage stator vane assembly with an improved stator vane assembly is currently being accomplished Air Force wide.

There is no evidence that maintenance procedures at RAF Lakenheath were a contributing factor in this mishap. No other causal or contributing factors were found.

Under 10 U.S.C. 2254(d), any opinion of the accident investigators as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report may not be considered as evidence in any civil or criminal proceeding arising from an aircraft accident, nor may such information be considered an admission of liability by the United States or by any person referred to in those conclusions or statements.